



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,745	11/14/2002	Nenad Rijavec	BLD920020007	7517

56989 7590 11/17/2006

LAW OFFICE OF CHARLES W. PETERSON, JR. -- PRINTERS  
11703 BOWMAN GREEN DR.  
SUITE 100  
RESTON, VA 20190

EXAMINER

HUNTSINGER, PETER K

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/065,745	<b>Applicant(s)</b> RIJAVEC, NENAD	
	<b>Examiner</b> Peter K. Huntsinger	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 8/25/06 have been fully considered but they are not persuasive.

The applicant argues on pages 2 and 3 of the response in essence that:

**Paragraphs 10 and 26 of the publication disclose the limitations of claims 10 and 11.**

a. Paragraphs 10 and 26 do not teach disconnecting RIP machines or the sequencer remaining unchanged by additions and removals of raster image processors.

The applicant argues on pages 3 and 4 of the response in essence that:

**None of the references teach the limitations of claims 10 and 11.**

b. Venkateswar et al. disclose a sequencer (main processor 52) being connected to raster image processors (parallel processors 54) (Fig. 2a). Further, the claims 10 and 11 are rejected under 35 U.S.C. 112.

The applicant argues on pages 3 and 4 of the response in essence that:

**Claims 10 and 11 provide the disclosure of an advantage for the design choice rejection of claim 1.**

c. The limitations of claims 10 and 11 are not described in the applicant's specification and are rejected under 35 U.S.C. 112.

The applicant argues on pages 4 and 5 of the response in essence that:

**The patentability of claim 1 is not being considered as a whole.**

d. Barry et al. disclose a sequencer (instruction operator for job file 114 of Fig. 1a) which has an output port networked and communicating with the input ports of said plurality of raster image processors (col. 4, lines 34-40). Barry et al. do not disclose expressly a sequencer directly connected to the input ports of the raster image processors. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to directly connect the sequencer with the input ports of the raster image processors. Applicant has not disclosed that directly connecting the sequencer with the input ports of the raster image processors provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a distributor connecting the sequencer and the raster image processors because both designs perform the same function of parsing and distributing the images to the raster image processors.

The applicant argues on page 5 of the response in essence that:

**The fact that a prior art reference can be modified to show the patented invention does not make the modification obvious unless the prior art reference suggests the desirability of the modification.**

Art Unit: 2625

- e. The modification of Barry et al. is shown to be obvious by the design choice rejection, which does not require Barry et al. to disclose the desirability of the modification.

The applicant argues on pages 6 and 7 of the response in essence that:

**Barry et al. do not teach a print server.**

- f. Barry et al. disclose control PC 1020 (Fig. 10, col. 15, lines 10-28). This computer controls printer 1026 and thus can be considered a print server.

The applicant argues on pages 6 and 7 of the response in essence that:

**Fuji et al. does not teach multiple print head drivers between a print server and a printer.**

- g. Barry et al. disclose a print head driver between a server and a printer (print driver 102 of Fig. 1a, col. 3, lines 13-15). Barry et al. do not disclose expressly a plurality of head drivers. Fujii et al. disclose a plurality of print head drivers, each of which controls the application of colorant to a sheet and has an input port receiving data signals; a rasterizer with an output port communicating with the input ports of said plurality of print head driver; and generating data signals to be communicated to said print head drivers (col. 6, lines 60-65). Barry et al. and Fujii et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers.

Art Unit: 2625

The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer.

The applicant argues on pages 8 and 9 of the response in essence that:

**None of the references teach communicating queued packaged print stream data portions directly over a network.**

h. Venkateswar et al. disclose communicating queued packaged print stream data portions directly over a network (col. 2, lines 21-28). The data portions are disclosed to be communicated and inherently must be connected by some means which would constitute a network.

The applicant argues on page 9 of the response in essence that:

**None of the references teach adding or removing raster image processor at the sequencer output port as recited in claims 10 and 11.**

i. The limitations of claims 10 and 11 are not described in the applicant's specification and are rejected under 35 U.S.C. 112.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2625

3. Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 10 and 11 include the limitation wherein said raster image processors may be disconnected to said sequencer output port, and also said sequencer remaining unchanged by additions and removals of connected and disconnected said raster image processors. Neither of these limitations is described in the applicant's specification.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 9 recites a program product comprising a computer readable medium. The claim language should be changed to claim a computer readable medium comprising a program product.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2625

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390.

Referring to claim 1, Barry et al. disclose an apparatus comprising: a pipeline of elements processing print control data and having: a plurality of raster image processors, each of which has an input port receiving parsed page data (Rip engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and a sequencer (instruction operator for job file 114 of Fig. 1a) which has an output port networked and communicating with the input ports of said plurality of raster image processors (col. 4, lines 34-40) and an input port receiving a print data stream (col. 3, lines 19-22), said sequencer monitoring data flows among the pipelined elements and parsing a print data stream into local data portions related to individual pages and global state data portions related to characteristics shared across a plurality of pages (col. 4, lines 52-62), said sequencer packaging together parsed page local and global state data portions (col. 4, lines 34-40); said raster image processors processing in parallel packaged parsed page data related to a plurality of pages (col. 2, lines 9-20). Barry et al. do not disclose expressly a sequencer directly connected to the input ports of the raster image processors. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to directly connect the sequencer with the input ports of the raster image processors. Applicant has not disclosed that directly connecting the sequencer with the input ports of the raster image processors provides an advantage, is used for a particular purpose



Art Unit: 2625

or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a distributor connecting the sequencer and the raster image processors because both designs perform the same function of parsing and distributing the images to the raster image processors. Barry et al. do not disclose expressly a plurality of head drivers. Fujii et al. disclose a plurality of print head drivers, each of which controls the application of colorant to a sheet and has an input port receiving data signals; a rasterizer with an output port communicating with the input ports of said plurality of print head driver; and generating data signals to be communicated to said print head drivers (col. 6, lines 60-65). Barry et al. and Fujii et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers. The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer. Therefore, it would have been obvious to combine Fujii et al. with Barry et al. to obtain the invention as specified in claim 1.

Referring to claim 3, Fujii et al. disclose an apparatus according to claim 1 wherein each of said raster image processors converts data from a form communicated as a print data stream to a form to be communicated as data signals to a print head driver (col. 6, lines 60-65).

Art Unit: 2625

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied to claim 1 above, and further in view of Venkateswar et al. U.S. Patent 6,532,016.

Referring to claim 2, Barry et al. and Fujii et al. disclose rasterizing images and generating data signals communicated to a print head driver, but do not disclose expressly a raster queue. Venkateswar et al. disclose queuing packaged individual page data to be communicated to said raster image processors and further wherein individual ones of said raster image processors draw from said queued data as processing of data related to an individual page is completed (col. 2, lines 21-28). Barry et al., Fujii et al., and Venkateswar et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to queue data designated for a plurality of rasterizers. The motivation for doing so would have been to increase the speed of image rasterization by preparing images designated for rasterization before the rasterizer requests new data. Therefore, it would have been obvious to combine Venkateswar et al. with Barry et al. and Fujii et al. to obtain the invention as specified in claim 2.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied to claim 3 above, and further in view of Hohensee et al. U.S. Patent 5,946,460.

Referring to claim 4, Barry et al. disclose raster image processors but do not disclose expressly converting into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. Hohensee disclose each of said raster image processors converts data from a form communicated as a print data stream into a variable number of portions depending upon whether an individual page is to be blank or to be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60). Barry et al. and Hohensee et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a rasterizer to convert into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. The motivation for doing so would have been to produce a separate bitmap for each color of ink required to print the page. Therefore, it would have been obvious to combine Hohensee et al. with Barry et al. to obtain the invention as specified in claim 4.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943, Fujii et al. U.S. Patent 6,315,390, and Hohensee et al. U.S. Patent 5,946,460.

Referring to claim 5, Barry et al. disclose an apparatus comprising: a pipeline of elements connected between a printer server and a printer and processing print control data from said print server, and said pipeline of elements having: a plurality of raster image processors, each of which has an input port receiving parsed page data (Rip

Art Unit: 2625

engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and a sequencer (instruction operator for job file 114 of Fig. 1a) which has an output port networked and communicating with the input ports of said plurality of raster image processors (col. 4, lines 34-40) and an input port receiving a print data stream (col. 3, lines 19-22), said sequencer monitoring data flows among the pipelined elements and parsing a print data stream into local data portions related to individual pages and global state data portions related to characteristics shared across a plurality of pages (col. 4, lines 52-62), said sequencer packaging together parsed page local and global state data portions (col. 4, lines 34-40); said raster image processors processing in parallel packaged parsed page data related to a plurality of pages (col. 2, lines 9-20). Barry et al. disclose a print head driver between a server and a printer (print driver 102 of Fig. 1a, col. 3, lines 13-15) but does not disclose expressly a plurality of head drivers. Fujii et al. disclose a plurality of print head drivers, each of which controls the application of colorant to a sheet and has an input port receiving data signals; a rasterizer with an output port communicating with the input ports of said plurality of print head driver; and generating data signals to be communicated to said print head drivers (col. 6, lines 60-65). Barry et al. and Fujii et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers. The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer. Barry et al. do not disclose expressly converting into a variable number of portions depending on whether a page is

Art Unit: 2625

to be blank, single colored, or multiple colored. Hohensee disclose each of said raster image processors converts data from a form communicated as a print data stream into a variable number of portions depending upon whether an individual page is to be blank or be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60). Barry et al. and Hohensee et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a rasterizer to convert into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. The motivation for doing so would have been to produce a separate bitmap for each color of ink required to print the page. Therefore, it would have been obvious to combine Hohensee et al. with Barry et al. and Fujii et al. to obtain the invention as specified in claim 5.

10. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943, Fujii et al. U.S. Patent 6,315,390, and Venkateswar et al. U.S. Patent 6,532,016.

Referring to claims 6 and 9, Barry et al. disclose a method comprising the steps of: receiving a print data stream from a print server and parsing the stream into local (col. 4, lines 34-38) and global portions (col. 4, lines 26-30); packaging together parsed local and global print stream data portions (col. 5, lines 8-13). Barry et al. do not disclose expressly a raster queue. Venkateswar et al. disclose queuing packaged print stream data portions; and communicating queued packaged print stream data portions

Art Unit: 2625

directly to a plurality of raster image processors (col. 2, lines 21-28). Barry et al. and Venkateswar et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to queue data designated for a plurality of rasterizers. The motivation for doing so would have been to increase the speed of image rasterization by preparing images designated for rasterization before the rasterizer requests new data. Barry et al. disclose processing a plurality of communicated packaged print stream data portions in parallel but do not disclose expressly a plurality of head drivers. Fujii et al. disclose generating print head driving data signals; and communicating the generated print head driving data signals to a printer and to the print heads of said printer (col. 6, lines 60-65). Barry et al. and Fujii et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to process rasterized data for print head drivers. The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer. Therefore, it would have been obvious to combine Fujii et al. with Barry et al. and Venkateswar et al. to obtain the invention as specified in claims 6 and 9.

Referring to claim 7, Barry et al. disclose a method according to claim 6 wherein said step of packaging print stream data portions comprises packaging portions applicable to individual pages (col. 7, lines 34-36).

Referring to claim 8, Barry et al. disclose a method according to claim 6 wherein said step of processing comprises generating bit map data signals (col. 10, lines 59-60).

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied to claims 1 and 5 above, and in further view of Venkateswar et al. U.S. Patent 6,532,016.

Referring to claims 10 and 11, Barry et al. disclose the sequencer and raster image processors but do not disclose expressly the sequencer being connected to the raster image processors. Venkateswar et al. disclose a sequencer (main processor 52) being connected to raster image processors (parallel processors 54) (Fig. 2a). Barry et al. and Venkateswar et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to connect the master processor with the parallel processors. The motivation for doing so would have been to eliminate the need for a separate component to separate and distribute data. Barry et al. further disclose wherein said raster image processors may be connected and disconnected, said sequencer remaining unchanged by additions and removals of connected and disconnected said raster image processors (col. 5, lines 38-45). Therefore, it would have been obvious to combine Venkateswar et al. with Barry et al. to obtain the invention as specified in claims 10 and 11.

### ***Conclusion***

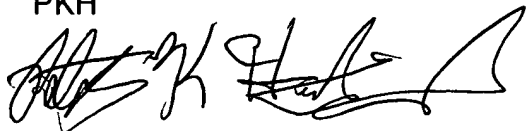
Art Unit: 2625

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter K. Huntsinger whose telephone number is (571)272-7435. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571)272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PKH



  
KIMBERLY WILLIAMS  
SUPERVISORY PATENT EXAMINER